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Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	09/626,096
Filing Date	July 26, 2000
First Named Inventor	UMEK
Group Art Unit	1645
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-68271-2/RFT/RMS/RMK

PAT. SHEET 1 of 3

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
NAC	1	4,704,193		Bowers et al.	11/1987	
	2	4,787,963		MacConnell	11/1988	
	3	4,945,045		Forrest et al.	07/1990	
	4	5,089,112		Skotheim et al.	02/1992	
	5	5,180,968		Bruckenstein et al.	01/1993	
	6	5,242,828		Bergstrom et al.	09/1993	
	7	5,328,824		Ward et al.	07/1994	
	8	5,391,272		O'Daly et al.	02/1995	
	9	5,436,161		Bergstrom et al.	07/1995	
	10	5,443,701		Willner et al.	08/1995	
	11	5,571,568		Ribi et al.	06/1989	
	12	5,632,957		Heller et al.	05/1997	
	13	5,700,667		Marble et al.	12/1997	
	14	5,795,453		Gilmartin	08/1998	
	15	5,837,859		Teoule et al.	11/1998	
	16	5,849,486		Heller et al.	12/1998	
	17	6,060,023		Maracas	05/2000	
	18	6,060,327		Keen	05/2000	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>4</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
NAC	19	WO	97/31256	A3	Cornell Research Found.	08/1997		
	20	WO	97/41425	A1	Pence Inc.	11/1997		
	21	WO	98/51823	A1	Mosaic Technologies	11/1998		

Examiner Signature	<i>Keith R. Calvert</i>	Date Considered	12/08/2004
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<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English Language Translation is attached.

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First Named Inventor				UMEK	
Group Art Unit				1645	
Examiner Name				Not Yet Assigned	
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Sheet	of	3			

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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)			
KAC	33	WO	98/57319	A1	Clinical Micro Sensors, Inc.	11/1999	
	34	WO	99/29711	A1	Nanogen Inc.	06/1999	
	35	WO	98/31839	A2	President and Fellows of Harvard College	07/1998	

Examiner Signature		Date Considered	12/08/2004
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				Application Number	09/626,096
				Filing Date	July 26, 2000
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				Group Art Unit	1645
				Examiner Name	Not Yet Assigned
				Attorney Docket Number	A-68271-2/RFT/RMS/RMK
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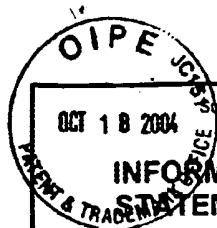
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<b>Substitute for form 1449A/PTO (Modified)</b> <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	09/626,098		
		Filing Date	July 26, 2000		
		First Named Inventor	UMEK, Robert M.		
		Art Unit	1637		
		Examiner Name	Calamita, Heather		
Sheet	1	of	10	Attorney Docket Number	A-68271-2/RMS/RMK/SPL (463037-00204)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
Hae	A1	4,656,127	04-07-1987	Mundy	
	A2	4,683,195	07-28-1987	Mullis et al.	
	A3	4,683,202	07-28-1987	Mullis	
	A4	4,713,347	12-15-1987	Mitchell et al.	
	A5	4,851,331	07-25-1989	Vary et al.	
	A6	4,876,187	10-14-1989	Duck et al.	
	A7	4,988,617	01-29-1991	Landegren et al.	
	A8	5,011,769	04-30-1991	Duck et al.	
	A9	5,015,569	05-14-1991	Pontius	
	A10	5,130,238	07-14-1992	Malek et al.	
	A11	5,156,810	10-20-1992	Ribi	
	A12	5,171,853	12-15-1992	Thorp et al.	
	A13	5,175,270	12-29-1992	Nilsen et al.	
	A14	5,200,051	04-08-1993	Cozzette et al.	
	A15	5,238,808	08-24-1993	Bard et al.	
	A16	5,244,560	09-14-1993	Kuhr	
	A17	5,308,754	05-03-1994	Kankare et al.	
	A18	5,403,711	04-04-1995	Walder et al.	
	A19	5,409,818	04-25-1995	Davey et al.	
	A20	5,455,166	10-03-1995	Walker	
	A21	5,474,796	12-12-1995	Brennan	
	A22	5,487,973	01-30-1996	Nilsen et al.	
	A23	5,492,806	02-20-1996	Dmanac et al.	
	A24	5,494,810	02-27-1996	Barany et al.	
	A25	5,525,464	06-11-1996	Dmanac et al.	
	A26	5,534,424	07-09-1996	Uhlen et al.	
	A27	5,545,531	08-13-1996	Rava et al.	
	A28	5,547,839	08-20-1996	Dower et al.	
	A29	5,565,322	10-15-1996	Heller	
	A30	5,616,464	04-01-1997	Albagli et al.	
	A31	5,660,988	08-26-1997	Duck et al.	
	A32	5,670,322	09-23-1997	Eggers et al.	

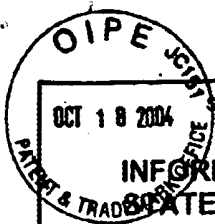
Examiner Signature	<i>Heather H. Calamita</i>	Date Considered	12/08/2004
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		Application Number	09/626,096		
		Filing Date	July 26, 2000		
		First Named Inventor	UMEK, Robert M.		
		Art Unit	1637		
		Examiner Name	Calamita, Heather		
Sheet	2	of	10	Attorney Docket Number	A-68271-2/RMS/RMK/SPL (463037-00204)

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
A/C	A33	5,695,940	12-09-1997	Drmanac et al.	
	A34	5,705,346	01-06-1998	Okamoto et al.	
	A35	5,710,028	01-20-1998	Eyal et al.	
	A36	5,727,548	03-17-1998	Hill et al.	
	A37	5,747,255	05-05-1998	Brenner	
	A38	5,767,259	06-16-1998	Albagli et al.	
	A39	5,780,224	07-14-1998	Collins et al.	
	A40	5,837,832	11-17-1998	Chee et al.	
	A41	5,846,708	12-08-1998	Hollis et al.	
	A42	5,846,717	12-08-1998	Brow et al.	
	A43	5,861,242	01-19-1999	Chee et al.	
	A44	5,871,918	02-16-1999	Thorp et al.	
	A45	5,874,046	02-23-1999	Megerle	
	A46	5,888,819	03-30-1999	Goelet et al.	
	A47	5,891,630	04-06-1999	Eggers et al.	
	A48	5,922,617	07-13-1999	Wang et al.	
	A49	5,925,520	07-20-1999	Tully et al.	
	A50	5,942,388	08-24-1999	Willner et al.	
	A51	5,942,397	08-24-1999	Tarlov et al.	
	A52	5,945,286	03-31-1998	Krihak et al.	
	A53	5,968,745	10-19-1999	Thorp et al.	
	A54	5,972,692	10-26-1999	Hashimoto et al.	
	A55	5,976,802	11-02-1999	Ansorge et al.	
	A56	6,066,448	05-23-2000	Wohlstadter et al.	
	A57	6,090,545	07-18-2000	Wohlstadter et al.	
	A58	6,361,671 B1	03-26-2002	Mathies et al.	

**FOREIGN PATENT DOCUMENTS**

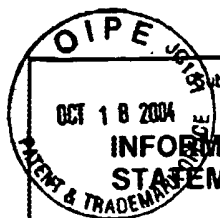
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code* Number* Kind Code* (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	†
A/C	B1	EP 0 142 301 A2	05-22-1985	Serono Diagnostics Limited		
	B2	EP 0 317 074 B1	05-24-1989	Orion-Yhtymä Oy		
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		Examiner Name	Calamita, Heather		
Sheet	3	of	10	Attorney Docket Number	A-68271-2/RMS/RMK/SPL (463037-00204)

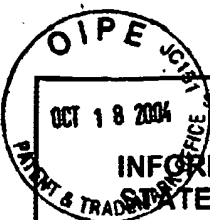
FOREIGN PATENT DOCUMENTS						
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HCC	B3	EP 0 371 437 B1	06-06-1990	Orion-Yhtymäe Oy		
	B4	EP 0 478 319 A1	04-01-1992	Tokyo Shibaura Electric Co.		
	B5	EP 0 668 502 A2	08-23-1995	Yissum Research Development		
	B6	WO 92/15712 A1	09-17-1992	Molecular Tool Inc.		
	B7	WO 93/10267 A1	05-27-1993	Igen, Inc.		
	B8	WO 93/25898 A1	12-23-1993	Medisense, Inc.		
	B9	WO 95/00666 A1	01-05-1995	The Research Foundation of State University of New York		
	B10	WO 95/00667 A1	01-05-1995	The Research Foundation of State University of New York		
	B11	WO 95/00669 A1	01-01-1995	Pharmacia Biotech AB		
	B12	WO 95/05480 A2/A3	02-23-1995	BioMedical Corp.		
	B13	WO 95/34816 A1	12-21-1995	Pharmacia Biosensor AB		
	B14	WO 96/06946 A1	03-07-1996	Igen, Inc.		
	B15	WO 97/13075 A1	09-05-1997	Danfoss A/S		
	B16	WO 97/27473 A1	07-31-1997	Northwestern University		
	B17	WO 98/04740 A1	02-05-1998	Northwestern University		
	B18	WO 98/12539 A1	03-26-1998	Meso Scale Technologies, LLC		
	B19	WO 98/49344 A1	11-05-1998	Lockheed Martin Energy Research Corp.		
	B20	WO 99/13109 A1	03-18-1999	Seq Ltd.		
	B21	WO 99/15893 A1	04-01-1999	Aventis Res. & Technologies GmbH & Co.		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
HCC	C1	ALEXANDER, V., "Design and Synthesis of Macrocyclic Ligands and Their Complexes of Lanthanides and Actinides," <i>Chem. Rev.</i> 95(2):273-342 (Mar. - Apr. 1995).	
HCC	C2	ALSFASSER, R., et al., "Novel Building Blocks for Biomimetic Assemblies. Synthesis, Characterization, and Spectroscopic and Electrochemical Properties of New Bidentate Ligands Derived from Lysine and Cystine and Their Complexes with Bis(2,2'-bipyridine)ruthenium(II)," <i>Inorg. Chem.</i> 35(3):628-636 (Jan. 1996).	

Examiner Signature		Date Considered	11/08/2004
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Sheet	4	of	10	Attorney Docket Number	A-68271-2/RMS/RMK/SPL (463037-00204)

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Hee	C3	ARKIN, M., et al., "Rates of DNA-Mediated Electron Transfer Between Metallointercalators," <i>Science</i> 273(5274):475-480 (Jul. 1996).			
	C4	BAINS, W., et al., "A Novel Method for Nucleic Acid Sequence Determination," <i>J. Theor. Biol.</i> 135(3):303-307 (Dec. 1988).			
	C5	BARANY, F., "Genetic disease detection and DNA amplification using cloned thermostable ligase," <i>Proc. Natl. Acad. Sci. USA</i> 88(1):189-193 (Jan. 1991).			
	C6	BEATTIE, K., et al., "Advances in Genosensor Research," <i>Clin. Chem.</i> 41(5):700-706 (1995).			
	C7	BIGNOZZI, C., et al., "A simple poly(pyridine)ruthenium(II) photosensitizer: (2,2'-bipyridine)tetracyanoruthenate(II)," <i>J. Am. Chem. Soc.</i> 108(24):7872-7873 (Nov. 1986).			
	C8	BJERRUM, M., et al., "Electron transfer in ruthenium-modified proteins," <i>J. Bioenerg. Biomembr.</i> 27(3):295-302 (Jun. 1995).			
	C9	BLONDER, R., et al., "Application of redox enzymes for probing the antigen-antibody association at the monolayer interfaces: development of amperometric immunosensor electrodes," <i>Anal. Chem.</i> 68(18):3151-3157 (Sep. 1996).			
	C10	CARLSSON, C., et al., "Screening for genetic mutations," <i>Nature</i> 380(6571):207 (Mar. 1996).			
	C11	CARTER, M., et al., "Electrochemical investigations of the interaction of metal chelates with DNA. 3. Electrogenenerated chemiluminescent investigation of the interaction of tris(1,10-phenanthroline)ruthenium(II) with DNA," <i>Bioconj. Chem.</i> 1(4):257-263 (Jul. - Aug. 1990).			
	C12	CARTER, P., et al., "Oxidation of DNA Hairpins by Oxoruthenium(IV): Effects of Sterics and Secondary Structure," <i>Inorg. Chem.</i> 35(11):3348-3354 (May. 1996).			
	C13	CARUANA, D. J., et al., "Enzyme-amplified amperometric detection of hybridization and of a single base pair mutation in an 18-base oligonucleotide on a 7-µm-diameter microelectrode," <i>J. Am. Chem. Soc.</i> 121(4):769-774 (Feb. 1999).			
	C14	CHAILAPAKUL, O., et al., "Interactions between organized, surface-confined monolayers and liquid-phase probe molecules. 4. synthesis and characterization of nanoporous molecular assemblies: mechanism of probe penetration," <i>Langmuir</i> 11(4):1329-1340 (Apr. 1995).			
	C15	CHENG, J., et al., "Selectivity and sensitivity of self-assembled thioctic acid electrodes," <i>Anal. Chem.</i> 64(17):1998-1999 (Sep. 1992).			
	C16	CHIEM, N., et al., "Microfluidic Systems for Clinical Diagnostics," <i>Transducers'97, Intl. Conf. Solid-State Sens. Actuators</i> , Chicago, IL (Jun. 16 - 19, 1997).			
	C17	CLARKE, P.R., et al., "Physical and chemical aspects of ultrasonic disruption of cells," <i>J. Acoustics Soc. Am.</i> 50 649-653 (1970).			
	C18	DAIZADEH, I., et al., "Effect of protein dynamics on biological electron transfer," <i>Proc. Natl. Acad. Sci. USA</i> 94(8):3703-3708 (Apr. 1997).			
	C19	DAUBENDIEK, S., et al., "Generation of catalytic RNAs by rolling trascription of synthetic DNA nanocircles," <i>Nat. Biotechnol.</i> 15(3):273-277 (Mar. 1997).			

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Application Number		09/626,096	
Filing Date		July 26, 2000	
First Named Inventor		UMEK, Robert M.	
Art Unit		1637	
Examiner Name		Calamita, Heather	
Attorney Docket Number		A-68271-2/RMS/RMK/SPL (463037-00204)	
Sheet	5	of	10

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## **NON PATENT LITERATURE DOCUMENTS**

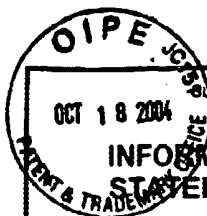
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Hce	C20	DELAMARCHE, E., et al., "Immobilization of antibodies on a photoactive self-assembled monolayer on gold," <i>Langmuir</i> 12(8):1997-2006 (Apr. 1996).	
	C21	DOKTYCZ, M., et al., "Genosensors and Model Hybridization Studies," <i>Automation Technologies for Genome Characterization</i> , T. Beugelskijk (ed.), John Wiley & Sons: New York, NY, 1997, 10:205-225.	
	C22	DONG, S., "Self-assembled monolayers of thiols on gold electrodes for bioelectrochemistry and biosensors," <i>Bioelectrochem. Bioenerg.</i> 42(1):7-13 (1997).	
	C23	DONTHA, N., et al., "Generation of biotin/avidin/enzyme nanostructures with maskless photolithography," <i>Anal. Chem.</i> 69(14):2619-2625 (Jul. 1997).	
	C24	DORON, A., et al., "An Electroactive photoisomerizable monolayer-electrode: a command surface for the amperometric transduction of recorded optical signals," <i>Angew. Chem. Int. Ed. Engl.</i> 35(13&14):1535-1538 (Jul. 1996).	
	C25	DRMANAC, R., et al., "Sequencing of Megabase Plus DNA Hybridization: Theory of the Method," <i>Genomics</i> 4(2):114-128 (Feb. 1989).	
	C26	DUAN, C., et al., "Separation-free sandwich enzyme immunoassays using microporous gold electrodes and self-assembled monolayer/immobilized capture antibodies," <i>Anal. Chem.</i> 66(9):1369-1377 (May. 1994).	
	C27	DUCEY, M., et al., "Competitive nonseparation electrochemical enzyme binding/immunoassay (NEEIA) for small molecule detection," <i>Anal. Chim. Acta</i> 357(1&2):5-12 (Dec. 1997).	
	C28	EGGERS, M., et al., "Genosensors: Microfabricated Devices for Automated DNA Sequence Analysis," <i>Adv. DNA Sequencing Tech.</i> 1891:113-126 (1993).	
	C29	EGHOLM, M., et al., "Peptide nucleic acids (PNA) Oligonucleotide Analogues with an Achiral Peptide Backbone," <i>J. Am. Chem. Soc.</i> 114(5):1895-1897 (Feb. 1992).	
	C30	ELLIOTT, C.M., et al., "Electrochemistry, spectroelectrochemistry, and photochemistry of a series of new covalently linked tris(2,2'-bipyridine)ruthenium(II)/diquat complexes," <i>J. Am. Chem. Soc.</i> 107(16):4647-4655 (Aug. 1985).	
	C31	EVENSEN, H., et al., "Automated fluid mixing in glass capillaries," <i>Rev. Scient. Instrum.</i> 69(2):519-526 (Feb. 1998).	
	C32	EWING, A., et al., "Electrochemical detection in microcolumn separations," <i>Anal. Chem.</i> 66(9):527A-537A (May 1994).	
	C33	FOJTA, M., et al., "Supercoiled DNA-modified mercury electrode: A highly sensitive tool for the detection of DNA damage," <i>Anal. Chim. Acta</i> 342(1):1-12 (Apr. 1997).	
	C34	FOSSUM, E., "Novel Sensor Enables Low-Power, Miniaturized Imagers," <i>Photonics Spectra</i> 125-126 (Jan. 1996).	
	C35	FUKUI, K., et al., "Distance dependence of photoinduced electron transfer in DNA," <i>Angew. Chem. Int. Ed. Engl.</i> 37(1&2):158-161 (Feb. 1998).	
	C36	GHINDILIS, A., et al., "Immunosensors: electrochemical sensing and other engineering approaches," <i>Biosens. Bioelect.</i> 13(1):113-131 (Jan. 1998).	
C37	GONGORA-RUBIO, M.R., et al., "Overview of low temperature co-fired ceramics tape technology for meso-systems/technology (MsST)," <i>Sens. Actuators A</i> 89(3):222-241 (Apr. 2001).		

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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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## Complete if Known

Application Number	09/626,096
Filing Date	July 26, 2000
First Named Inventor	UMEK, Robert M.
Art Unit	1637
Examiner Name	Calamita, Heather
Attorney Docket Number	A-68271-2/RMS/RMK/SPL (463037-00204)

Sheet

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NAC	C38	GOODWIN, D., et al., "Microwave Miniprep of Total Genomic DNA from Fungi, Plants, Protists and Animals for PCR," <i>BioTechniques</i> 15(3):437-441 (1993).	
	C39	GOZEL, P., et al., "Electrokinetic resolution of amino acid enantiomers with copper(II)-aspartame support electrolyte," <i>Anal. Chem.</i> 59(1):44-49 (Jan. 1987).	
	C40	HALL, D., et al., "Sensitivity of DNA-Mediated Electron Transfer to the Intervening $\pi$ -Stack: A Probe for the Integrity of the DNA Base Stack," <i>J. Am. Chem. Soc.</i> 119(21):5045-5046 (May. 1997).	
	C41	HARRISON, D., et al., "Characterization of perfluorosulfonic acid polymer coated enzyme electrodes and a miniaturized integrated potentiostat for glucose analysis in whole blood," <i>Anal. Chem.</i> 60(19):2002-2007 (Oct. 1988).	
	C42	HARRISON, D., et al., "Immunoassay Flow Systems n-Chip," <i>Solid-State Sensor and Actuator Workshop</i> , Hilton Head, SC, pp. 5-8 (1996).	
	C43	HASHIMOTO, K., et al., "DNA sensor: A novel electrochemical gene detection method using carbon electrode immobilized DNA probes," <i>Supramol. Chem.</i> 2:265-270 (1993).	
	C44	HERNE, T.M., et al., "Characterization of DNA Probes Immobilized on Gold Surfaces," <i>J. Am. Chem. Soc.</i> 119(38):8916-8920 (Sep. 1987).	
	C45	HOFFMANN, A., et al., "Purification of his-tagged proteins in non-denaturing conditions suggests a convenient method for protein interaction studies," <i>Nucleic Acids Res.</i> 19(22):6337-6338 (Nov. 1991).	
	C46	HWANG, J-T., et al., "Synthesis of 2'-Modified Oligodeoxynucleotides via On-column Conjugation," <i>J. Org. Chem.</i> 66(2):363-369 (Jan. 2002).	
	C47	HWANG, J-T., et al., "Synthesis of Modified Oligodeoxyribonucleotides on a Solid Phase Support via Derivatization of a Selectively Revealed 2'-Amino-2-deoxyuridine," <i>Org. Lett.</i> 1(12):2021-2024 (Dec. 1999).	
	C48	IHARA, T., et al., "Gene sensor using ferrocenyl oligonucleotide," <i>Chem. Commun.</i> 17:1609-1610 (1997).	
	C49	JIANG, L., et al., "Direct electron transfer reactions of glucose oxidase immobilised at a self-assembled monolayer," <i>J. Chem. Soc. Chem. Commun.</i> 12:1293-1295 (1995).	
	C50	JONSSON, U., et al., "Biosensors based on surface concentration measuring devices - The concept of surface concentration," <i>Prog. Colloid Polym. Sci.</i> 70:96-100 (1985).	
	C51	KATZ, E., et al., "Application of stilbene-(4,4'-diisothiocyanate)-2,2'-disulfonic acid as a bifunctional reagent for the organization of organic materials and proteins onto electrode surfaces," <i>J. Electroanal. Chem.</i> 354(1&2):129-144 (1993).	
	C52	KATZ, E., et al., "Electrical contact of redox enzymes with electrodes: novel approaches for amperometric biosensors," <i>Bioelectrochem. Bioenerg.</i> 42(1):95-104 (1997).	
	C53	KATZ, E., et al., "Electron Transfer in Self-Assembled Monolayers of N-Methyl-N'-carboxyalkyl-4-4'-bipyridinium Linked to Gold Electrodes," <i>Langmuir</i> 9(5):1392-1396 (May. 1993).	
	C54	KELLEY, S.O., et al., "Photoinduced Electron Transfer in Ethidium-Modified DNA Duplexes: Dependence on Distance and Base Stacking," <i>J. Am. Chem. Soc.</i> 119(41):9861-9870 (Oct. 1997).	
	C55	KIRSCHENHEUTER, G., et al., "An Improved Synthesis of 2'-Azido-2'-Deoxyuridine," <i>Tetrahedron Lett.</i> 35(46):8517-8520 (Nov. 1994).	

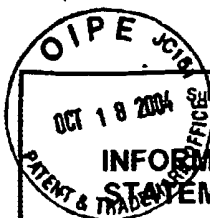
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		Art Unit	1637
Examiner Name	Calamita, Heather		
Attorney Docket Number	A-68271-2/RMS/RMK/SPL (463037-00204)		
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McG	C56	KOHNE, D., et al., "Room temperature method for increasing the rate of dna reassociation by many thousandfold: the phenol emulsion reassociation technique," <i>Biochemistry</i> 16(24):5329-5341 (Nov. 1977).	
	C57	KRETSCHMANN, E., et al., "Radioactive Decay of Non Radiative Surface Plasmons Excited by Light," <i>Z. Naturforsch.</i> 23A:2135-2136 (1968).	
	C58	KUNITAKE, M., et al., "Transmembrane rectified electron transfer through $\pi$ -conjugated electroactive langmuir-blodgett monolayers on gold electrodes," <i>Bull. Chem. Soc. Jpn.</i> 67(2):373-378 (1994).	
	C59	LEE, S.-W., et al., "A micro cell lysis device," <i>Sens. Actuators A</i> 73(1&2):74-79 (Mar. 1999).	
	C60	LI, J., et al., "Direct electron transfer to cytochrome c oxidase in self-assembled monolayers on gold electrodes," <i>J. Electroanal. Chem.</i> 416(1&2):97-104 (Nov. 1996).	
	C61	LI, J., et al., "Viologen-thiol self-assembled monolayers for immobilized horseradish peroxidase at gold electrode surface," <i>Electrochim. Acta</i> 42(6):961-967 (1997).	
	C62	LION-DAGAN, M., et al., "A Bifunctional Monolayer Electrode consisting of 4-Pyridyl Sulfide and Photoswitchable Spiropyran: Photoswitchable Electrical Communication between the Electrode and Cytochrome C," <i>J. Chem. Soc. Chem. Commun.</i> 24:2741-2742 (1994).	
	C63	LIU, R., et al., "Passive mixing in a three dimensional serpentine microchannel," <i>J. Microelectromech. Syst.</i> 9(2):190-196 (Jun. 2000).	
	C64	LIVACHE, T., et al., "Biosensing effects in functionalized electroconducting conjugated polymer layers: addressable DNA matrix for the detection of gene mutations," <i>Synth. Metals</i> 71:2143-2146 (1995).	
	C65	LOWE, C.R., "An Introduction to the Concepts and Technology of Biosensors," <i>Biosensors I</i> , pp. 3-16 (1985).	
	C66	LYSOV, Y., et al., "A new method for determining the DNA nucleotide sequence by hybridization with oligonucleotides," <i>Doklady Biochem. Proc. Acad. Sci. USSR</i> 303(6):436-438 (May. 1989).	
	C67	MANDLER, D., et al., "Applications of self-assembled monolayers in electroanalytical chemistry," <i>Electroanalysis</i> 8(3):207-213 (1996).	
	C68	McGEE, D., et al., "Novel nucleosides via intramolecular functionalization of 2,2'-anhydrouridine derivatives," <i>Tetrahedron Lett.</i> 37(12):1995-1998 (1996).	
	C69	MICHALITSCH, R., et al., "Properties of self-assembled monolayers (SAMS) from thiol-functionalized oligothiophenes," <i>Adv. Mater.</i> 9(4):321-325 (Apr. 1997).	
	C70	MIKKELSEN, S., "Electrochemical Biosensors for DNA Sequence Detection," <i>Electroanalysis</i> 8(1):15-19 (1996).	
	C71	MIR, K., et al., "Determining the influence of structure on hybridization using oligonucleotide arrays," <i>Nat. Biotechnol.</i> 17(8):788-792 (Aug. 1999).	
	C72	MIRKHALAF, F., et al., "Surface spectroscopy and electrochemical characterisation of metal dithizonates covalently attached to gold by a self-assembled cysteamine monolayer," <i>J. Chem. Soc. Faraday Transact.</i> 94(9):1321-1327 (1998).	
	C73	MIRSKY, V., et al., "Capacitive monitoring of protein immobilization and antigen-antibody reactions on monomolecular alkylthiol films on gold electrode," <i>Biosens. Bioelect.</i> 12(9&10):977-989 (1997).	

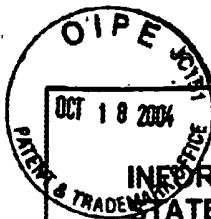
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**INFORMATION DISCLOSURE  
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Sheet **8** of **10** Application Number **09/628,096**  
Filing Date **July 26, 2000**  
First Named Inventor **UMEK, Robert M.**  
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<i>966</i>	C74	MISTLER, R.E., "Tape Casting: The Basic Process for Meeting the Needs of the Electronics Industry," <i>Ceramic Bull.</i> 69(6):1022-1026 (1990).	
	C75	MULLER, W., "Partitioning of Nucleic Acids", Partitioning in Aqueous Two-Phase Systems," <i>Partitioning in Aqueous Two-Phase Systems</i> , Academic Press, Inc.: San Diego, CA, 1995, 7:227-266.	
	C76	MULLER, W., et al., "DNA fractionation by two-phase partition with aid of a base specific macroligand," <i>Anal. Biochem.</i> 118(2):269-277 (Dec. 1981).	
	C77	NAPIER, M., et al., "Modification of Electrodes with Dicarboxylate Self-Assembled Monolayers for Attachment and Detection of Nucleic Acids," <i>Langmuir</i> 13(23):6342-6344 (Nov. 1997).	
	C78	NORTHROP, M., et al., "A Miniature analytical instrument for nucleic acids based on micromachined silicon reaction chambers," <i>Anal. Chem.</i> 70(1):918-922 (Mar. 1998).	
	C79	NYBORG, W.L., "Acoustic Straining Near a Boundary," <i>J. Acoustics Soc. Am.</i> 30:329-339 (1958).	
	C80	OBENG, Y., et al., "Electrogenerated Chemiluminescence. 53. Electrochemistry and Emission from Adsorbed Monolayers of a Tris(bipyridyl) ruthenium (II)- Based Surfactant on Gold and Tin Oxide Electrodes," <i>Langmuir</i> 7(1):195-201 (Jan. 1991).	
	C81	PANG, D.-W., et al., "Modification of glassy carbon and gold electrodes with DNA," <i>J. Electroanal. Chem.</i> 403(1&2):183-188 (Feb. 1996).	
	C82	PARIKH, A., et al., "An intrinsic relationship between molecular structure in self-assembled <i>n</i> -alkylsiloxane monolayers and deposition temperature," <i>J. Phys. Chem.</i> 98(31):7577-7590 (Aug. 1994).	
	C83	PLAXCO, K., et al., "The importance of being unfolded," <i>Nature</i> 386(6626):657-659 (Apr. 1997).	
	C84	POTYRAILO, R., et al., "Adapting selected nucleic acid ligands (aptamers) to biosensors," <i>Anal. Chem.</i> 70(16):3419-3425 (Aug. 1998).	
	C85	PREZYNA, L., et al., "Interaction of catatonic polypeptides with electactive polypyrrole/poly(styrenesulfonate) and poly( <i>n</i> -methylpyrrole)/poly(styrenesulfonate) films," <i>Synth. Metals</i> 41(3):979-981 (May. 1991).	
	C86	ROJAS, M., et al., "Molecular Recognition at the Electrode-Solution Interface. Design, Self-Assembly, and Interfacial Binding Properties of a Molecular Sensor," <i>J. Am. Chem. Soc.</i> 117(21):5883-5884 (May. 1995).	
	C87	RÜCHEL, R.R., "Transmission-electron microscopic observations of freeze-etched polyacrylamide gels," <i>J. Chromatogr. A</i> 166(2):563-575 (Dec. 1978).	
	C88	SACHS, S., et al., "Rates of interfacial electron transfer through conjugated spacers," <i>J. Am. Chem. Soc.</i> 119(43):10563-10564 (Oct. 1997).	
	C89	SAKAMOTO, S., et al., "Design and synthesis of flavin-conjugated peptides and assembly on a gold electrode," <i>J. Chem. Soc. Perkin Transact. 2</i> 2(11):2319-2326 (1996).	
	C90	SMALLEY, J., et al., "Kinetics of Electron Transfer through Ferrocene-Terminated Alanethiol Monolayers Gold," <i>J. Phys. Chem.</i> 99(35):13141-13149 (Aug. 1995).	
	C91	SMITH, E., et al., "Corticotropin releasing factor induction of leukocyte-derived immunoreactive ACTH and endorphins," <i>Nature</i> 321(6073):881-882 (Jun. 1986).	

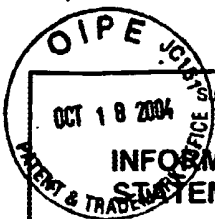
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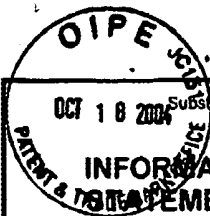
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		Application Number	09/626,096		
		Filing Date	July 26, 2000		
		First Named Inventor	UMEK, Robert M.		
		Art Unit	1637		
Examiner Name	Calamita, Heather				
Sheet	9	of	10	Attorney Docket Number	A-68271-2/RMS/RMK/SPL (463037-00204)

NON PATENT LITERATURE DOCUMENTS				
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Abc	C92	SMITH, L., et al., "Mapping and Sequencing the Human Genome: How to Proceed," <i>Biotechnology</i> 5:933-942 (1987).		
	C93	SOUTEYRAND, E., et al., "Direct detection of the hybridization of synthetic homo-oligomer DNA sequences by field effect," <i>J. Phys. Chem. B.</i> 101(15):2980-2985 (Apr. 1997).		
	C94	STEINBERG, S., et al., "Ion-Selective Monolayer Membranes Based upon Self-Assembling Tetradentate Ligand Monolayers on Gold Electrodes. 2. Effect of Applied Potential on Ion Binding," <i>J. Am. Chem. Soc.</i> 113(14):5176-5182 (Jul. 1991).		
	C95	STEINBERG, S., et al., "Ion-Selective Monolayer Membranes Based upon Self-Assembling Tetradentate Ligand Monolayers on Gold Electrodes. 3. Application as Selective Ion Sensors," <i>Langmuir</i> 8(4):1183-1187 (Apr. 1992).		
	C96	STELZLE, M., et al., "On the Application of Supported Bilayers as Receptive Layers for Biosensors with Electrical Detection," <i>J. Phys. Chem.</i> 97(12):2974-2981 (Mar. 1993).		
	C97	STORA, T., et al., "Metal ion trace detection by chelator-modified gold electrode: a comparison of surface to bulk affinity," <i>Langmuir</i> 13(20):5211-5214 (Oct. 1997).		
	C98	SUN, S., et al., "Preparation of active Langmuir-Blodgett films of glucose oxidase," <i>Langmuir</i> 7(4):727-737 (Apr. 1991).		
	C99	SYVÄNEN, A. C., "Detection of point mutations in human genes by the solid-phase minisequencing method," <i>Clin. Chim. Acta</i> 226(2):225-236 (May. 1994).		
	C100	TAKEDA, H., et al., "Preparation of 1-alkynyl 2-(trimethylsilyl)ethyl sulfides as thiolate anion precursors for self-assembled monolayers," <i>Tetrahedron Lett.</i> 39(22):3701-3704 (May. 1998).		
	C101	TERRETTAZ, S., et al., "Protein binding to supported lipid membranes: investigation of the cholera toxin-ganglioside interaction by simultaneous impedance spectroscopy and surface plasmon resonance," <i>Langmuir</i> 9(5):1361-1369 (May. 1993).		
	C102	TOMINAGA, M., et al., "Tuning of lipid bilayer fluidity regulates mediated electron transfer reactions of glucose oxidase immobilized on lipid bilayer films on an electrode," <i>Bioelectrochem. Bioenerg.</i> 42(1):59-62 (Apr. 1997).		
	C103	TOPFER, M. L., <i>Technology Thick-Film Microelectronics: Fabrication, Design, and Applications: Microelectronics Series</i> ; Litton Educational Publishing, Inc.: New York, NY, 3:41-59 (1971).		
	C104	TSUNEO, M., et al., "Coumarin-fluorescein pair as a new donor-acceptor set for fluorescence energy transfer study of DNA," <i>Tetrahedron Lett.</i> 41(15):2605-2608 (2000).		
	C105	WALKER, G. T., et al., "A Chemiluminescent DNA Probe Test Based on Strand Displacement Amplification," <i>Molecular Methods for Virus Detection</i> , ch. 15, pp. 329-349, Academic Press, Inc.: San Diego, CA (1995).		
	C106	WALLACE et al., "Electron Transfer of Yeast Cytochrome C Immobilized On Sam Modified Gold Electrodes", <i>Book of Abstracts, 214th ACS National Meeting</i> , Las Vegas, NV, PHYS-326, American Chemical Society, Washington D. C. (September 7-11, 1997).		
	C107	WANG, J., et al., "DNA biosensor for the detection of hydrazines," <i>Anal. Chem.</i> 68(13):2251-2254 (Jul. 1996).		
	C108	WANG, J., et al., "Trace measurements of nucleic acids using flow injection amperometry," <i>Anal. Chim. Acta</i> 319(3):347-352 (Feb. 1996).		

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Hed	C109	WELCH, T., et al., "Distribution of Metal Complexes Bound to DNA Determined by Normal Pulse Voltammetry," <i>J. Phys. Chem.</i> 100(32):13829-13836 (Aug. 1996).			
	C110	WELCH, T., et al., "Electron-Rich Oxoruthenium(IV) Cleavage Agents: A Zero-Order Rate Law for DNA Catalysis," <i>Inorg. Chem.</i> 36(21):4812-4821 (Oct. 1997).			
	C111	WILDING, P., et al., "PCR in a Silicon Microstructure," <i>Clin. Chem.</i> 40(9):1815-1818 (Sep. 1994).			
	C112	WOOD, J.C., et al., "Time-Frequency Transforms: A New Approach to First Heart Sound Frequency Dynamics," <i>IEEE Transact. Biomed. Eng.</i> 39(7):730-740 (1992).			
	C113	YGUERABIDE, J., et al., "Quantitative Fluorescence Method for Continuous Measurement of DNA Hybridization Kinetics Using a Fluorescent Intercalator," <i>Anal. Biochem.</i> 228(2):208-220 (Jul. 1995).			

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